

Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for altering a T cell mediated pathology in a patient, said method comprising:
administering a composition comprising a chimeric protein;
said chimeric protein comprising at least a portion of a V_B or V_α region of a TCR, and at least a portion of an immunoglobulin constant region;
wherein said V_B or V_α region is associated with a particular TCR from a T cell from said patient having said T cell mediated pathology; and
said administering of said composition alters said T cell mediated pathology in said patient.
2. (Original) The method of claim 1 wherein said composition further comprises a second chimeric protein comprising at least a portion of V_α or V_B region of a TCR, and at least a portion of a second immunoglobulin constant region.
3. (Original) The method of claim 1 wherein said immunoglobulin constant region comprises a human IgG $_{\gamma 1}$ constant region.
4. (Original) The method of claim 1 wherein said V_α or V_B region of a TCR of said chimeric protein is a V_B .

5. (Original) The method of claim 1 wherein said V_α or V_β region of a TCR of said chimeric protein is a V_α .
6. (Original) The method of claim 1 wherein said chimeric protein further comprises a linker region between said V_α or V_β region and said portion of an immunoglobulin constant region;
wherein said linker region is a portion of the C_β or C_α region of a TCR, but not the entire C_β or C_α region, or a synthetic linker region.
7. (Original) The method of claim 2 wherein said second chimeric protein further comprises a second linker region between said V_α or V_β region and said portion of an immunoglobulin constant region;
wherein said linker region is a portion of the C_β or C_α region of a TCR, but not the entire C_β or C_α region, or a synthetic linker region.
8. (Original) The method of claim 1 or 2 wherein said V_α or V_β region of a TCR of said first chimeric protein is a V_β and said V_α or V_β region of a TCR of said second chimeric protein is a V_α .
9. (Original) The method of claim 2 wherein said second immunoglobulin constant region comprises a human κ or λ constant region.
10. (Original) The method of claim 1 or 2 wherein said V_β region of a TCR is an entire V_β region.
11. (Original) The method of claim 1 or 2 wherein said V_β region comprises an entire V_β region and said portion of a C_β comprises the first nine amino acids from a TCR β chain constant region (C_β).

12. (Original) The method of claim 1 or 2 wherein said V_{α} region of a TCR is an entire V_{α} region.
13. (Original) The method of claim 6 or 7 wherein said V_{α} region comprises an entire V_{α} region and said linker region comprises the first nine amino acids from a TCR α chain constant region (C_{α}).
14. (Original) The method of claim 1 or 2 wherein said first or second immunoglobulin constant region is selected from the group consisting of a human $IgG_{\gamma 1}$ constant region, a human $IgG_{\gamma 2}$ constant region, a human $IgG_{\gamma 3}$ constant region, a human $IgG_{\gamma 4}$ constant region, a human IgA_1 constant region, a human IgA_2 constant region, a human IgM constant region, a human IgD constant region, a human IgE constant region, a human κ chain constant region, and a human λ chain constant region.
15. (Original) The method of claim 1 wherein said chimeric protein is produced by a method comprising:
- isolating genes encoding said V_{β} or V_{α} regions of a TCR from T cells of said patient having said T cell mediated pathology;
 - inserting said genes encoding said V_{β} or V_{α} region of the TCR, a linker region, and the gene encoding said immunoglobulin constant region into an expression vector to allow the expression of said first chimeric protein;
 - producing said chimeric proteins by introducing said expression vector into insect cell lines; and isolating said chimeric proteins.
16. (Original) The method of claim 15 further comprising the step of inserting a gene encoding either V_{β} or V_{α} region of the TCR, a linker region, and a gene encoding at

least a portion of a second immunoglobulin constant region into said expression vector to allow the expression of said second chimeric protein.

17. (Original) The method of claim 15 or 16 wherein said linker region of said first or second chimeric protein is a portion of the C_β or C_α region of a TCR, but not the entire C_β or C_α region, or a synthetic linker region.

18. (Original) The method of claim 15 or 16 further comprising a step of conjugating said chimeric proteins to a carrier protein.

19. (Original) The method of claim 18 wherein said carrier protein is keyhole-limpet hemocyanin (KLH).

20. (Original) The method of claim 1 wherein said composition is further co-administered with a cytokine or chemokine.

21. (Original) The method of claim 20 wherein said cytokine is granulocyte-macrophage-colony stimulating factor (GM-CSF).

22. (Withdrawn) The method of claim 20 wherein said chemokine is a monocyte chemotactic protein 3 (MCP 3).

23. (Original) The method of claim 15 wherein said expression vector is a baculovirus expression vector.

24. (Original) The method of claim 23 wherein said baculovirus expression vector comprises a honey bee melittin secretory signal sequence and a human placental alkaline phosphatase secretory signal sequence.

25. (Original) The method of claim 24 wherein said baculovirus expression vector further comprises a baculovirus AcNPV p10 promotor and AcNPV polyhedrin promotor, said p10 promotor controls a honey bee melittin, and said polyhedrin promotor controls a human placental alkaline phosphatase.
26. (Original) The method of claim 25 wherein said genes encoding said V_{β} region of the TCR and said genes encoding said first immunoglobulin constant region are controlled by said p10 promotor in said baculovirus expression vector, said genes encoding said V_{α} region of the TCR and said genes encoding said second first immunoglobulin constant region are controlled by polyhedrin promotor in said baculovirus expression vector.
27. (Original) The method of claim 25 wherein said genes encoding said V_{β} or V_{α} region of the TCR, and said genes encoding said immunoglobulin constant region are controlled by either said p10 promotor or polyhedrin promotor in said baculovirus expression vector.
28. (Original) The method of claim 15 wherein said genes encoding said first immunoglobulin constant region comprises a human $\text{IgG}_{\gamma 1}$ gene.
29. (Original) The method of claim 16 wherein said second immunoglobulin constant region comprises a human κ or λ constant region gene.
30. (Original) The method of claim 15 or 16 wherein said gene encoding said immunoglobulin constant region is selected from the group consisting of a human $\text{IgG}_{\gamma 1}$ constant region, a human $\text{IgG}_{\gamma 2}$ constant region, a human $\text{IgG}_{\gamma 3}$ constant region, a human $\text{IgG}_{\gamma 4}$ constant region, a human IgA_1 constant region, a human IgA_2 constant region, a

human IgM constant region, a human IgD constant region, a human IgE constant region, a human κ constant region and a human λ constant region.

31. (Original) The method of claim 15 wherein said first chimeric protein is TCR V_{β} - C_{β} -IgG $_{\gamma 1}$, TCR V_{α} - C_{α} - κ or TCR V_{α} - λ .

32. (Original) The method of claim 16 wherein said first and second chimeric proteins are TCR V_{β} - C_{β} -IgG $_{\gamma 1}$ and TCR V_{α} - C_{α} - κ or TCR V_{β} - C_{β} -IgG $_{\gamma 1}$ and TCR V_{α} - C_{α} - λ .

33. (Original) The method of claim 13 wherein said insect cell lines are *Trichoplusia ni* (Hi - 5) or *Spodoptera frugiperda* (sf9) cell lines.

34. (Original) The method of claim 15 or 16 wherein said chimeric proteins are analyzed for expression by ELISA.

35. (Original) The method of claim 15 or 16 wherein said chimeric proteins are isolated using a protein selected from the group consisting of protein A, protein G, protein L and other proteins being able to bind to an immunoglobulin binding domain.

36. (Original) The method of claim 35 wherein said other protein able to bind an immunoglobulin binding domain is an anti-immunoglobulin antibody.

37. (Original) The method of claim 1 wherein said T cell mediated pathology is T cell lymphoma.

38. (Withdrawn) The method of claim 1 wherein said T cell mediated pathology is an autoimmune disease selected from the group consisting of multiple sclerosis, systemic

lupus erythematosus, diabetes, inflammatory bowel disease, myasthenia gravis,
rheumatoid arthritis, and thyroiditis.

Claims 39 – 56 (Canceled).

CONCLUSION

Pursuant to 37 C.F.R. 1.121, only the corrected section of the non-compliant amendment has been re-submitted in its entirety.

The shortened statutory period for reply expires on April 28, 2006. Therefore, no fee is believed to be due in connection with this submission. However, if the Office determines that any fee is due, please charge Deposit Account No. 23-2415, referencing docket no. 30795-702.201.

If the Office believes, for any reason, that personal communication will expedite prosecution of this application, the Office is invited to telephone the undersigned at (858) 350-2309.

Respectfully submitted,

WILSON SONSINI GOODRICH & ROSATI

Date:

April 18, 2006



Russell T. Boggs, Ph.D., Reg. No. 55,011

650 Page Mill Road
Palo Alto, CA 94304
(650) 493-9300
Customer No. 021971